

DEPARTMENT of ENVIRONMENTAL SERVICES
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: KILTON POND	Lake Area (ha): 27.52
Town: GRAFTON	Maximum depth (m): 3.1
County: Grafton	Mean depth (m): 1.2
River Basin: Merrimack	Volume (m ³): 318500
Latitude: 43°35'12" N	Relative depth: 0.5
Longitude: 71°58'39" W	Shore configuration: 2.15
Elevation (ft): 850	Areal water load (m/yr): 40.15
Shore length (m): 4000	Flushing rate (yr ⁻¹): 34.70
Watershed area (ha): 1813.0	P retention coeff.: 0.39
% watershed ponded: 1.0	Lake type: artificial

BIOLOGICAL:

3 February 1994

29 June 1993

DOM. PHYTOPLANKTON (% TOTAL)	#1	SYNURA 75%	CHRYOSOPHAERELLA 99%
	#2	DINOBYRON 10%	
	#3		
PHYTOPLANKTON ABUNDANCE (cells/mL)			575
CHLOROPHYLL-A (µg/L)			3.13
DOM. ZOOPLANKTON (% TOTAL)	#1	KELLICOTTIA 61%	KERATELLA 38%
	#2	GASTROPUS 14%	POLYARTHRA 16%
	#3	CALANOID COPEPOD 12%	BOSMINA 16%
ROTIFERS/LITER		100	144
MICROCRUSTACEA/LITER		24	64
ZOOPLANKTON ABUNDANCE (#/L)		124	223
VASCULAR PLANT ABUNDANCE			Common
SECCHI DISK TRANSPARENCY (m)			2.6 Visible on bottom
BOTTOM DISSOLVED OXYGEN (mg/L)		11.4	7.8
BACTERIA (E. coli, #/100 ml)	#1		2
	#2		2
	#3		

SUMMER THERMAL STRATIFICATION:

not stratified

Depth of thermocline (m): None
Hypolimnion volume (m³) : None
Anoxic volume (m³) : None

CHEMICAL:

Lake: KILTON POND

Town: GRAFTON

	3 February 1994		29 June 1993		
DEPTH (m)	1.5		1.0		2.0
pH (units)	6.4		7.0		
A.N.C. (Alkalinity)	7.1		8.6		
NITRATE NITROGEN	0.12		< 0.02		< 0.02
TOTAL KJELDAHL NITROGEN	0.22		0.37		0.31
TOTAL PHOSPHORUS	0.005		0.012		0.012
CONDUCTIVITY (μ mhos/cm)	63.0		75.4		73.0
APPARENT COLOR (cpu)	9		28		28
MAGNESIUM			0.88		
CALCIUM			4.8		
SODIUM			9.2		
POTASSIUM			0.59		
CHLORIDE	9		12		12
SULFATE	7		6		6
TN : TP	68		31		26
CALCITE SATURATION INDEX			2.7		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1993

D.O. S.D. PLANT CHL TOTAL CLASS

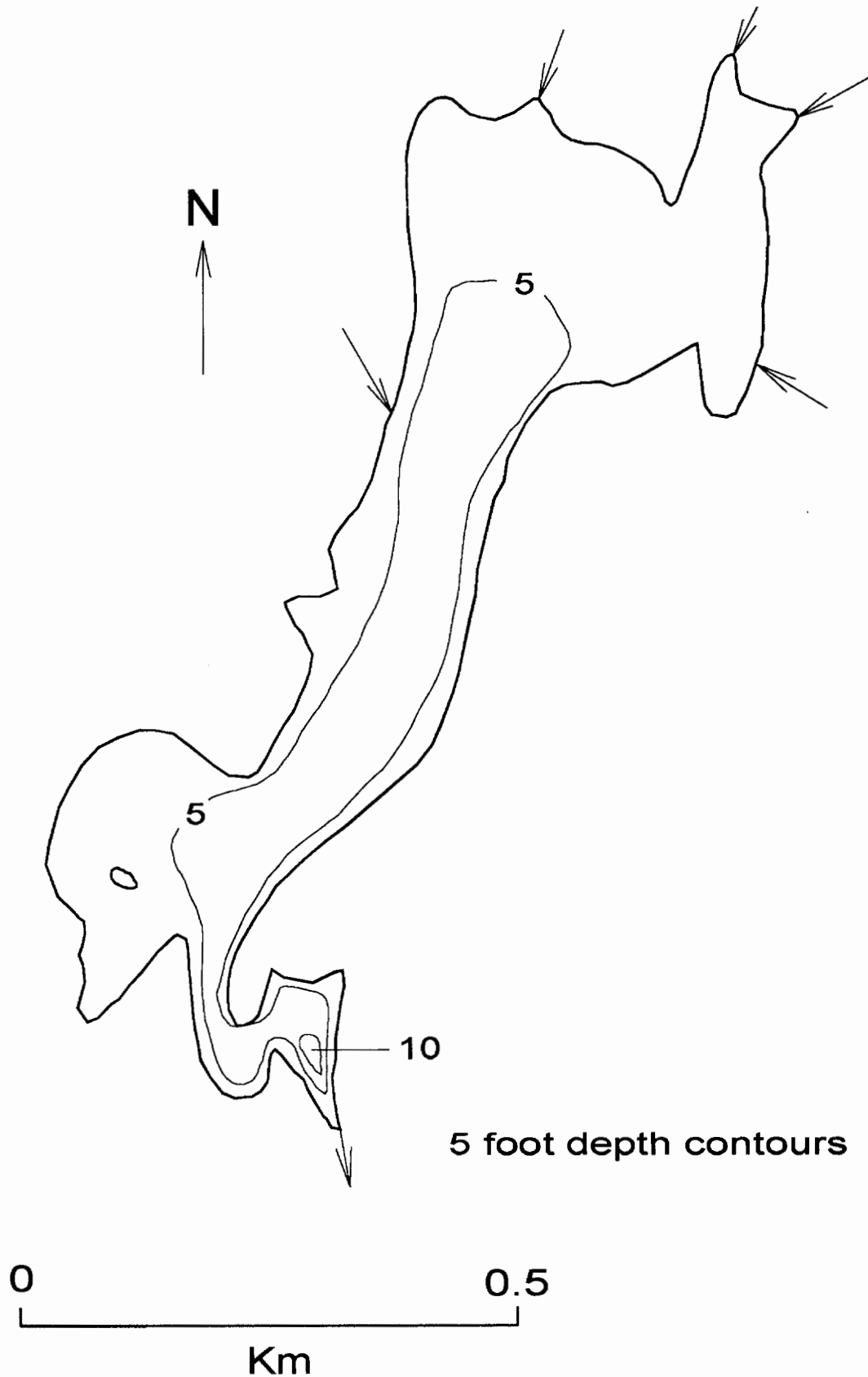
**	2	3	0	5	Meso.
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COMMENTS:

1. This pond was previously surveyed and classified in 1979. It received two additional trophic points in 1993 which were enough to move the pond from an oligotrophic to a mesotrophic rating. There was little change in water quality; the additional points were due to a subjectively perceived increase in plant growth.
2. No boat launch; canoe was launched at the dam.
3. Town beach was present adjacent to the dam.
4. The dominant wholewater phytoplankton were Chrysosphaerella (20%) Cryptomonas (15%) and Tetraëdron (10%).

Kilton Pond

Grafton

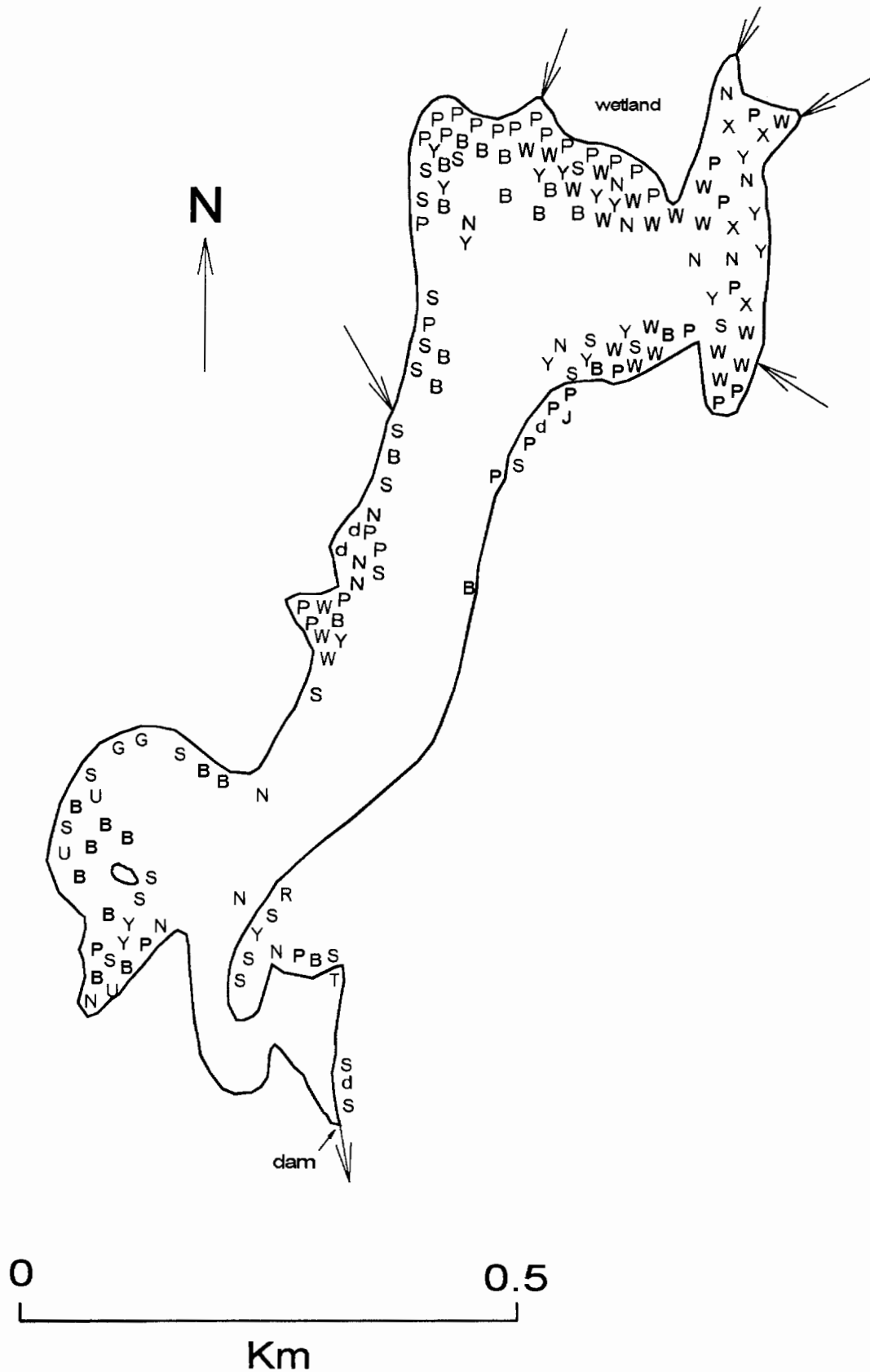


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***Dissolved oxygen values are in mg/L**

Kilton Pond

Grafton



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